

Virginia  
Wildlife

OCTOBER 1972

VOLUME XXXIII / NUMBER 10

20 CENTS



# Virginia Wildlife

**Dedicated to the Conservation of  
Virginia's Wildlife and Related Natural Resources  
and to the Betterment of  
Outdoor Recreation in Virginia**

**Published by VIRGINIA COMMISSION OF GAME AND INLAND FISHERIES, Richmond, Virginia 23230**



## COMMONWEALTH OF VIRGINIA

**LINWOOD HOLTON, Governor**

### Commission of Game and Inland Fisheries

#### COMMISSIONERS

EDWARD E. EDGAR, *Chairman* . . . . . Norfolk  
G. RICHARD THOMPSON, *Vice Chairman* . . . . . Marshall  
R. G. GUNTER . . . . . Abingdon  
DOLPH HAYS . . . . . Arlington  
ALLAN A. HOFFMAN, M.D. . . . . Danville  
JOHN P. RANDOLPH . . . . . Spring Grove  
M. GARDNER SMITH . . . . . Gloucester  
RICHARD E. WATKINS . . . . . Richmond  
RALPH L. WEAVER . . . . . Waynesboro  
WILLIAM H. WEST . . . . . Millwood

#### ADMINISTRATIVE OFFICERS

CHESTER F. PHELPS, *Executive Director*  
RICHARD H. CROSS, JR. . . . . *Chief, Game Division*  
JACK M. HOFFMAN . . . . . *Chief, Fish Division*  
JAMES F. MCINTEER, JR. . . . . *Chief, Education Division*  
JOHN H. McLAUGHLIN *Chief, Law Enforcement Div.*  
SAM J. PUTT . . . . . *Chief, Fiscal Division*

#### PUBLICATION OFFICE: Commission of Game and Inland Fisheries, 4010 W. Broad St., Richmond, Virginia

JAMES F. MCINTEER, JR. . . . . *Editor*  
ANN E. PILCHER . . . . . *Editorial Assistant*  
LEON G. KESTELOO . . . . . *Photographer*  
HARRY L. GILLAM . . . . . *Circulation*

## OCTOBER

**Volume XXXIII/No. 10**

### IN THIS ISSUE

### PAGE

A Law for Wildlife . . . . .	3
Letters . . . . .	3
Old Dominion Pheasants . . . . .	4
Fishing on the "Spot" . . . . .	6
The Growin' of a Sportsman . . . . .	8
Grouse Crops: A Habitat Barometer . . . . .	10
Wild Goose Motel . . . . .	12
Conservationgram . . . . .	13
October Scarlet . . . . .	14
Villain in Black . . . . .	16
In Nature's Garden: Three Bright Berries . . . . .	18
The Big Powhatan Buck . . . . .	20
1971-72 Big Game Harvest . . . . .	20
Big Game Trophy Contest . . . . .	21
Know Your Biologists: John W. Kaufman; Fielding F. Tanner, Jr. . . . .	22
The Drumming Log . . . . .	24
Youth Afield . . . . .	25
On the Waterfront . . . . .	26
Bird of the Month: The Ring-billed Gull . . . . .	27
Boat Owners! Is Your Motorboat Numbered? . . . . .	28

Observations, conclusions and opinions expressed in *Virginia Wildlife* are those of the authors and do not necessarily reflect those of the members or staff of the Commission of Game and Inland Fisheries.

**COVER:** Ruffed grouse. Our artist: Roger Flythe, Abingdon, Virginia.

**SUBSCRIPTIONS:** One year, \$2.00; three years, \$5.00. Make check or money order payable to Treasurer of Virginia and send to Commission of Game and Inland Fisheries, P. O. Box 11104, Richmond, Virginia 23230.

## A Law For Wildlife

IN the family of American wildlife, the game animal is the rich uncle. It is studied, managed, and greatly valued by professional conservationists and sportsmen. Millions are spent each year on the management and hunting of deer, waterfowl, pheasants, quail, rabbits, and other game species.

Then there are the poor relatives: the nongame species.

They are no less beautiful or unique than the game species, nor less worthy of our concern. But because they are not hunted, they are not the objects of intense, hunter-sponsored conservation programs. As Dr. Joe Linduska once wrote:

"It is said that the bluebird is declining in numbers and is in trouble. That is a sad state of affairs, but it would probably not be so if the bluebird weighed three pounds and held well to a pointing dog . . ."

If the bluebird, or any other nongame wildlife, is in trouble it's not for lack of protection. Nearly all songbirds are protected by state and federal law. But while a bird may be protected from shooting, it's not protected from our technology. And to many wildlife species, the bulldozer, dragline and intensive farming are deadlier than bullets.

Protection is needed, of course. Even heavily hunted wildlife is protected—by closed seasons, bag limits, shooting hours, prescribed methods of take, and refuge areas. But protection alone won't do the job. By itself, it is generally a hands-off, do-nothing approach. The best protection for any wildlife species is positive management.

This has been proven with our major game species. We have learned a great deal about their biology, what makes them fail or flourish, and how to manage them as well as possible. There are gifted wildlife biologists who spend their entire careers studying a single game species and its environment.

Compared to pheasants and quail, we know practically nothing about orioles and bluebirds. And we debase ourselves and our world by saying: "So what? Bluebirds and orioles have no economic value . . ."

To anyone who loves nature in its completeness, it would be a dreary world with no wildlife but game species: no eagles, ospreys or hawks; no gulls or pelicans; no bobolinks, warblers, prairie dogs, kit foxes, coyotes, grebes, bitterns or flying squirrels, to say nothing of such desperately rare creatures as the lordly whooping crane, California condor, and peregrine falcon. And today, with man's heavy hand felt through all nature, it's time that we gave such creatures some of the priority attention that has been largely reserved for game animals and birds. We must broaden wildlife conservation to include all species of wildlife—not just the favored few.

Most Americans will never hunt, nor visit our great game ranges and see our most spectacular wildlife species. But that doesn't mean that they should be denied a chance to share in America's wildlife splendor. The chance to

(Continued on page 23)

Extracted by permission from "A LAW FOR WILDLIFE" by John Madson and Ed Kozicky, Conservation Department, WINCHESTER-WESTERN Division, OLIN.

## LETTERS

### What Price "Damage Stamps"

AS a neutral citizen, I am continually asked how to interpret this sentence (relating to big game "damage" stamps in certain counties):

"Nonresident in Bath, Grayson, Smyth and Wythe Counties . . . \$5.00"

Even the game warden did not know!

What it says is that anyone who does not live in the COUNTY named pays five bucks. What I thought it meant was that non-Virginians would be charged the five bucks. Which is it?

Since we run about 15,000 damage stamps a year, it will mean a lot to the economy of this gigantic shale barrens!

Understand the bread, the dough, collected will be used to finance the landfills (two) of the county. Far cry from big game damage!

Robert P. Carroll  
Millboro

*The language of the law is clear enough, even if the abbreviated version in the Commission's game law summary is not. The applicable statute permits certain counties to assess the \$5.00 fee on nonresidents of the Commonwealth, not on nonresidents of the respective counties.*

*These county big game hunting stamps were first authorized to provide a means for certain counties to collect from hunters funds to pay landowners for property damage allegedly inflicted by deer and bear. The validity of the premise that hunters should be taxed to pay for damage done by game they failed to harvest was questionable, at best. In more recent years counties have been authorized to spend the "damage stamp" funds on such projects as installing a telephone line, paying bounties on foxes and bobcats (for shame!), cleaning up trash, and capturing stray dogs.—Ed.*

### Raise More Carp?

I have just read the article on "Carp—A Wasted Resource" (*Virginia Wildlife*, September, 1972) which I enjoyed very much and found provocative. Why doesn't the Game Commission start a pilot project with carp "pools" and encourage marketing these fish? It does seem to me there are many ways to increase and cheapen the food supply, especially now when everybody's budget is creaking with the strain.

Majorie Latham Masselin  
Richmond

*It is possible that carp farming could be as profitable as catfish farming if the species' undeservedly poor "image" as table fare could be turned around. However, the Game Commission would be just as much out of its field producing carp for the fish market as it would be sending dressed quail and pheasant from its game farm to poultry market. We would be happy if we could just get up more interest in utilizing the abundant carp supply that already exists in our natural waters, and that is almost totally overlooked by sportsmen.—Ed.*

**I**T was a beautiful point, the kind you rarely see when hunting pheasants. The dogs, Art's two Brittany spaniels and my English setter and German short-haired pointer, were zeroed in on a ragged patch of briars and vines. The cover was so dense it appeared impenetrable—even for wildlife.

We fully expected a big covey of quail to somehow explode from that maze of tangled vegetation, but as we edged within shooting range I spotted a big cock pheasant squatting in its midst.

"It's a p---!" The words never got out of my mouth. Suddenly the big gaudy bird was shooting skyward, ripping through the thick cover as if propelled from a rocket launcher. I swung on him, pawing the air with the tube of my 12 gauge automatic shotgun. Just as I thought I had him, he swerved sharply and I had to do it all over again.

My gun barked and almost simultaneously I heard the sharp report of Art's 20 gauge. The bird plummeted back to the earth almost as quickly and abruptly as he had left it.

"Wasn't sure you could see him." Art was almost apologetic, but he knew I was anxious to take home a fat pheasant for the table.

That was not the only pheasant we had seen in the afternoon of hunting, but it was the only one we had gotten a decent shot at. I picked the bird up and thanked Art for his help. My pheasant dinner was assured. The farm we were hunting was rich in quail as well as pheasant, and Art was more interested in bagging a limit of bobwhites.



Author with a brace of ringneck pheasants.

## OLD DOMINION PHEASANTS

By BOB GOOCH  
*Troy*

Art moves up in front of pointing dog.



South Dakota is too far away to go for hunting pheasants? And so is Iowa, Nebraska or Idaho. But how about Culpeper County in Northern Virginia?

It was late February—not a golden autumn day, the usual magazine cover depiction of ringneck hunting. The Old Dominion season had been open since October 1, and it still had another month to run.

We were hunting a private game preserve where both pheasants and quail were abundant. The pheasant had lured me there. I like quail hunting too, but the bobwhites are reasonably abundant in my home county of Fluvanna. Ringneck pheasant hunting was a new challenge, one I have few opportunities to accept.

Our afternoon hunt had started out fast. We were less than a hundred yards from the clubhouse when one of Art's Brittanies started making game across a farm road. We quickened our step, but had gone only a few yards when a beautiful cock pheasant, its bright green collar gleaming in the sun, flushed in front of the dog

VIRGINIA WILDLIFE

and sailed across the road toward us. We watched it settle in the heavy cover that bordered a tiny creek.

This looked easy.

My setter started working toward the bird from our side of the road, and we expected him to point momentarily. He too started making game, but could not pinpoint his quarry—nor did the bird flush as it had the first time.

And then I saw the reason.

The shrewd old bird had slipped out of the thicket and was sneaking along the narrow farm road.

We sprinted for the road, but by the time we reached it the bird had disappeared over a hill. We hunted the general area for a good half hour, but that old cock gave us the slip. Typical pheasant behavior.

For the next hour we were busy with pointing dogs and exploding coveys of quail.

Eventually we were working the cover along a large stream that skirted the farm. Art was on the outside of the thicket and I was following the well used trail that hugged the river. One of the Brittanies came to a sharp point and we moved in expecting another quail rise, but the exciting cackle of the big bird that thundered out told us we had another chance at a ringneck. Art shot first as the bird circled and headed back across the stream. My chance came as he roared over my head. If either of us as much as nicked him, it was not evident. The pheasant flew across the stream and into the woods on the far side. The woods were off limits, so we had to let him go.

Many experienced game farm managers have told me that while pen-raised quail have a tendency to become domesticated, pheasants never do. I was now witnessing an indisputable demonstration of this fact.

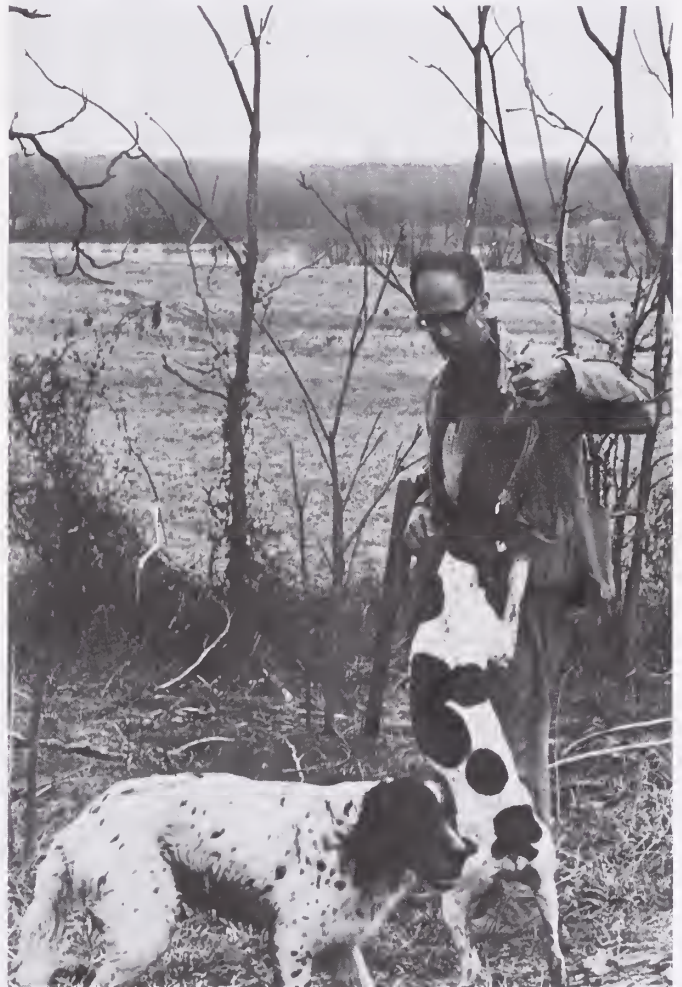
My experience with pheasants is limited, though I have hunted them under natural conditions in other states. If there is any difference between hunting for native birds and for the pen-raised ones, it was not evident to me. Those game farm birds pulled every trick in the book and as a result most of those we flushed evaded us. They jumped out of range, doubled back on the dogs, and ran. Several times we thought we had one pinned down only to see it flush from the far side of a patch of cover—out of range. And even when we were able to mark down a flushed bird, we found it hard to locate the second time.

The ringneck pheasant is, of course, a native of Asia. Veterans of our armed forces who have served in Viet Nam, Korea, and China have been exposed to them in their native habitat. They were first successfully introduced to America in 1881, but the birds have never reproduced in Virginia and other southern states, even though food and cover appear ideal. While those that are released adapt to life in the wild, they do not reproduce.

The American ringneck such as Art and I hunted  
OCTOBER, 1972

that day in Culpeper County is a mixture of several strains of imported species, though it is generally called the Chinese ringneck pheasant.

While the popular ringneck has not accepted the Old Dominion as country in which to rear its offspring, the Commission of Game and Inland Fisheries is working with several other species that show promise. A cross between the Iranian blackneck and the Imperial Valley ringneck is creating rays of hope. Brief seasons in 1971 and 1972 produced modest harvests of the exciting birds.



Art lets my German short-haired pointer nuzzle a downed pheasant.

Hopefully, the pheasant will one day take its place in the Virginia upland bird family alongside the grouse and bobwhite quail. Certainly the results so far are encouraging. The first ringneck was introduced to America a hundred years before the species was firmly established.

In the meantime the nimrod who hunts game farm birds will learn most of the tricks of the game. The major factor that separates the game farm bird from the mild one is the farm operator's modest fee.



Pier jockeys line up as thick as barnacles on a bateau (below) and rack up big spot two at a time (above).

AUGUST is that time of the year when the native "spot" is the people's choice. Among other things he's known as a boy's fish with the man's taste.

*Leiostomus xanthurus* is a mighty big handle for such a little fish. But, the little deep-bodied fish that is the smallest member of the croaker family is referred to on most out-of-town menus as the Norfolk Spot. Long ago when the spot gained its golden hue color in September, local natives called them "Ocean View Yellow-bellies."

Even during the American Revolution the spot was popular with the local folks and, thus, they referred to them as "Lafayette Spot."

Pioneers of early America desired to honor Lafayette for his great contributions to this country. What better way could a French general be honored? Today, with the great popularity of the bluefish, we might do it with "Lafayette Chopper-blue."

The spot certainly couldn't compare with the tug of a jumbo bluefish, the spectacular leaps of the mighty marlin, or the dangerous adventure of tying into an eight-foot mako; but, in this area, young boys fishing for spots consider them to be the "little league" of the fishing world.

The spot patrols the waters from the Jersey coast

## ***Fishing on the "Spot"***

By SONNY FENTRESS  
*Virginia Beach*



down to the Texas beaches, but their abundances reach a height in the Chesapeake Bay. However, you'll find the spotted tigger not only in the bay, but in rivers as well as in the ocean.

The little fish with the big following are also fairly plentiful in Delaware Bay. This delicious fish appears in Philadelphia and Wilmington markets as the "Cape May Goodie." If you are native to the area, no doubt about it you got started early in life chomping on the tasty spot fish. Newcomers and a few holdouts find the spot can be like taking your first sip of beer or champagne—you just have to cultivate a taste.

Most local fishermen eat spot like peanuts or potato chips. You just can't get enough. Rolled in yellow cornmeal, slipped into a pan of hot, boiling grease and taken out golden brown and paired up with a pan of yellow-gold corn bread is enough to send a spot-eater on a "trip."

This spot season had all the gill-marks of being one of the better seasons. They came in early and the size and color were equal to any of the past fall runs. Head boats with 25 and 30 anglers aboard were bringing back some 2,000 fish on excellent trips.

Captain Adrian Parks, skipper on the headboat Linda, out of D & M Sport Fishing Center at Lynnhaven, said, "Spots are caught best on the incoming tide. On an average trip our fishermen are putting 35-40 fish in their coolers."

With the sometimes on-again and off-again bloodworm shortage, I asked the good captain how this would affect our spot season. "The best trip I've had this year we used sandworms," he replied.

Several groups of fishermen reported successful catches on red-wigglers and earthworms. Pieces of crab and shrimp will suffice in a pinch, but the most productive are the worms.

Spots before your eyes. Some of these scrappy little fellows push a pound in weight.



Author's son Laird beams over a satisfying catch. Young boys consider spot fishing the Little League of the fishing world.

The bay anglers take the sporty spot with two methods. One is to anchor and still-fish. The other and most effective is drift-fishing. This method covers more fishing ground and gives the angler a better chance to locate more schools of fish. Stillfishing can be effective with the use of chum. A croaker sack or minnow trap is very handy in containing crushed-up crabs or mussels. Every so often the angler can reach over and jiggle the goodie bag, letting bits of meat and juices float out, sounding the dinner gong for nearby fish. Pier jockeys (anglers that fish from the same) oftentimes string up a can of dog or cat food and punch holes in the top and bottom, then jig this up and down, working out tasty tidbits for lurking fish dwellers. Dog meal is sometimes tossed over the side of the pier, and it works.

Some of the better hot spots in the Tidewater area for taking the little sporty fighter are the Hampton Bar, the vast oyster beds that parallel the sand strip at Ocean View, and the oyster and mussel beds adjacent to the Chesapeake Bay Bridge Tunnel. As many as 500 fishing boats of all sorts have been counted in the vicinity of the bay bridge in one day in pursuit of the spotted panfish.

Northeasters are great wind-controlling factors and early season northeasters push the pods of fish up into the bay and inland for some good pier fishing. But, come autumn, the blowing nor'easters move the little fellows out of the bay and on their migratory way.



# *The Growin' of A Sportsman*

By JACK RANDOLPH  
*Spring Grove*

THEY stood entranced on the wooded hillside. The valley rang with hound music, holding its small audience captivated as the music of few great masters could.

This was the song that made red blood race to a quickened pulse, that sent electric shocks up the spine, that dried the lips and dampened the palms. A primitive song that evoked primitive reactions.

The man and the boy listened but their eyes were alert. A veteran of many such chases, the man never ceased to feel the thrill of the chase, but today was special. He had no son of his own and the boy had no father. For an instant in his life the elder hunter was experiencing a father's pride as he watched the boy shiver with the excitement of his first chase.

Winter had long since denuded the trees that now stood in sharp silhouette against the brightening sky. The woods on the far slope were like a low hanging black cloud, contrasting sharply with green field of winter rye grass that grew more brilliant as the sun climbed its well worn path in the eastern sky to light the valley floor.

The hounds were singing their song in the dark forests beyond the field, their long stretched out notes coming closer by the moment.

As if by magic the fox materialized along the far edge of the field. The rays of the morning sun, as if directed by some great hand, fell upon the animal causing his winter prime coat to blaze with almost unreal beauty against the emerald green of the field. The fox seemed to float out onto the field with his great white-tipped tail streaming behind him like a great banner.

Apparently the animal had just been pushed from his morning bed by the hounds. They broke into their "jump song," their cries reaching a fever pitch as they drove to catch their quarry.

The fox seemed oblivious to the clamor of the approaching hounds. It gave the watchers on the hill the impression that it had too much dignity to be put to ignominious flight by a pack of lowly hounds.

The boy had never so much as seen a fox in the wild before, let alone shoot one. At first he was entranced by the animal, its startling colors and its almost regal manner. But now it was approaching to within shotgun range. Anxiously, on trembling arms he raised his gun, but to his uncomprehending amazement the man reached out slowly and pressed the muzzle down.

"Let's let this one live to run some more," he whispered.

The boy looked at him, a trace of tears in his young eyes. The man could see no understanding in the pleading expression in the youngster's face.

"Son, you already have your trophy," said the man, searching for an eloquence alien to his taciturn nature. "In your mind's eye you'll see that beautiful animal blazing across that green field for the rest of your life. His coat will grow richer and redder with each passing year. Shoot him now and you'll see his pelt fade and grow moth eaten and you'll never be able to remember the sight we shared this morning."

The man was a little embarrassed. This was probably the longest speech he had ever made in his life, but



Slowly the lad was learning. In time he would reach the final stage of development from mere hunter to true sportsman.

more, in a way he had bared his soul to the boy, showing him a love for the outdoors that one would never suspect dwelt behind that weather-seasoned exterior.

The fox, his keen ears picking up the murmur of human voices, stopped in mid-stride. With only the slightest hesitation it dashed into the brush along the field and disappeared.

As the animal vanished, the boy's spirits sank. He had been cheated of his first opportunity to kill a red fox. He couldn't appreciate the value of memories. He had opportunity to gather but few in his young life. His was a life of realities. When he went home, he couldn't tell his Mom he saw a fox worth remembering. He wanted to show her the rich pelt, the three dollar bounty, and receive her praise.

It was an unhappy boy who followed the man off the hill, hurrying towards the cars to meet the others and follow the chase of the wide ranging red fox. When they gained the meeting place, the others were already there.

"Did you see the fox?" asked one.

"Yeh," said the man. "It was a red. We're in for a long day."

"Was it close enough for a shot?" queried the hunter, nodding towards the boy, the only member of the party carrying a gun.

"He could have shot the fox," acknowledged the man, "but he thought it was too early in the chase."

The boy did not miss the looks of approval he received from the others. One slapped him on the back and tasseled his hair, saying, "You're a fox hunter already. A fox runnin' before the pack is worth a dozen on the barn door."

Suddenly the boy felt his sense of loss diminish within him. It was replaced with a curious mixture of pride and shame. Pride in his acceptance by his companions and shame for his true desire to kill the fox.

For him this was a unique experience. Until now he measured hunting success by the amount of game he bagged. Now he found himself enjoying a hunt and taking some measure of pride in not killing a fine game animal. He wanted the respect of his fellow hunters as an equal, yet he sorely wanted that fox's pelt. This would require some thought.

When they next caught up with the chase and set out on foot, his shotgun remained behind in the car.

The lad had reached an important crossroads in his development as a sportsman. Until this day he had never thought about much more than just killing game. He took it as he found it, giving little thought to the wildlife, how it lived, and how it was there for him to hunt in the first place. The almost regal appearance of the fox made him aware of a dignity unique to wild creatures. The attitude of his companions exposed him for the first time to another sense of dignity unique to sportsmen.

Slowly the lad was learning that the killing was only a small part of it. He was about to learn, if he was ever to aspire to the lofty rank of sportsman, that the hunter took onto himself considerable responsibilities, not only to his fellow hunters but to the game itself.

As time went on, he would commence to take more pleasure in the hunt than the kill. He would begin to feel the sheer joy of being outdoors with good men. He would take satisfaction in just seeing game, and a full game bag would no longer be his objective. His trigger finger would have a conscience all its own, forgoing risky shots more apt to wound than to kill.

If he's lucky he will reach the final stage of development and discover an insatiable thirst for learning about wildlife, opening to himself a new world leading to a

greater depth of understanding and appreciation of the out of doors.

Sadly, not all hunters complete the metamorphosis. They become hung up along the way, some never progressing beyond the first stage, and great is their loss.

The next milestone in the boy's development came late the following fall. He was hunting deer in a snow-covered woods. Not just any deer would satisfy him. He was intent upon bagging a magnificent 14-point buck he had come upon late the previous summer. The lad had spent many days watching for the animal, learning its habits and determining just how he was going to outsmart it. He sorely wanted to hang those perfect, heavy antlers over his mantle piece.

This was not his first attempt to outsmart the great buck. He had hunted it at every opportunity only to be foiled by a vagrant breeze, interference by other hunters or a nervous doe. The season was waning and with it his chances of gathering his trophy.

He had been in his tree stand for hours. Two does had passed earlier. Otherwise the long day had been uneventful and the light of the late afternoon was fading fast. The lad was stiff with cold, afraid to move for fear of falling. He decided to wait a few more minutes.

Three shots a quarter of a mile away broke the evening calm. Perhaps the shots were fired at deer. Optimistically he imagined that the distant shots might drive the deer, his deer, towards him. It was a remote chance but these are the things hunters trade upon.

Fifteen minutes passed before he heard a twig snap in the thick brush beyond his range of vision. He strained his eyes in the fading light. Gone were the chills and the stiffness. He was alert now as something shook a low bush near the edge of the brush. Something was heading his way!

He hoped against hope that it would be his 14-point buck. He could see the deer now but the brush obscured the antlers. Then it stepped into the clear, its beautiful rack outlined against the snow. It was his buck! There was another smaller deer just behind it.

The deer moved closer. The boy had his gun up to his shoulder, waiting for the range to close. So intent was he on the great buck that he hardly noticed the small deer with the thin spikes behind it.

They were in range now and the boy carefully drew a bead on the big buck, but suddenly the smaller one fell, drawing the lad's attention.

As the little spike horn struggled to its feet the lad saw it was sorely wounded, probably the victim of the shots he heard a few minutes before.

The boy hesitated only an instant. The sound of his gun sent the great buck leaping high into the air, clearing the low brush as it bounded out of sight.

The smaller deer was suffering no more. It was out of pain now as the sportsman climbed down from his tree to claim his trophy.

# GROUSE CROPS

## A HABITAT BAROMETER

By  
 RICHARD F. HARLOW, *Wildlife Biologist*  
*Southwestern Forest Experiment Station*  
*USDA Forest Service, Blacksburg*

W. ALAN GUTHRIE, *Wildlife Biologist*  
*Virginia Commission of Game and Inland Fisheries*

THE word *chionophilic* has sometimes been used to describe members of the grouse family (Tetraonidae). Chiono means snow and philic means having an affinity for or attracted by, and thus we have "snow lovers." Its meaning is not inappropriate when one considers the ability of grouse to endure severe winter conditions.

A major reason for the grouse's ability to endure the rigors of winter is its habit of feeding by browsing, a term more often associated with hoofed animals than with birds. To browse means to feed on leaves, buds, and twigs. This feeding characteristic of grouse sets them apart from the true partridges, pheasants, and quail (family Phasianidae), which rely mainly on seeds and fruits for sustenance during winter. After snows have covered the ground vegetation, true partridges are at a disadvantage. Their food supply has been covered up. With grouse, however, their browsing habit helps sustain them until the spring thaw.

To better understand what habitat requirements are necessary to maintain and possibly increase grouse populations, it is essential that we first know what foods they depend upon. One of the quickest and easiest ways to determine this is to examine crop and gizzard contents.

We found an impressive study on early winter foods of grouse on the George Washington National Forest in Virginia by Nelson *et al* (1940). During the months of November and December, the period in which birds were legally hunted in 1935 and 1936, crops and gizzards from 185 grouse were collected and examined. Of the 98 kinds of foods identified in those crops, 19 composed the bulk of the diet, totalling 85 percent of the volume of the contents. Fifty-six percent by volume of the 19 items consisted of fruit, 35 percent evergreen and herbaceous leaves, and 9% buds and twigs. (see Fig. 1). Fruits of greatest importance (in descending order of volume) were greenbrier, acorns, grape, rose,

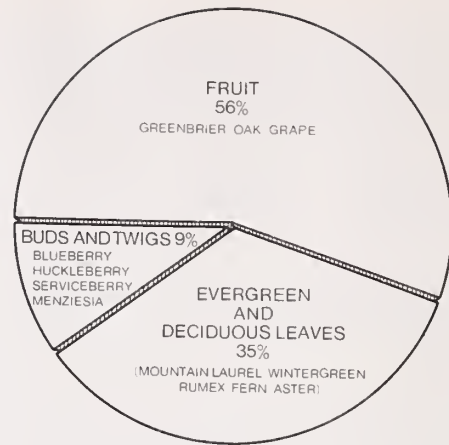


Figure 1.

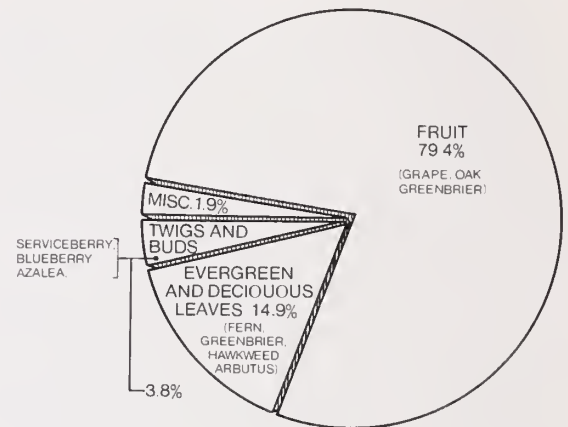


Figure 2.

viburnum, partridgeberry, sumac and hawthorn. Leaves of greatest importance were mountain laurel, wintergreen, sheep sorrel, fern, aster, pussytoes, and trailing arbutus. Buds and twigs present in greatest quantities were blueberries and huckleberry, menziesia, hazelnut, and serviceberry.

Stewart (1956) analyzed foods eaten by 29 grouse chicks collected during the spring and summer of 1941 from the George Washington National Forest. Twelve crops collected between May 28 and June 14 contained 91 percent by volume animal food (mainly insects) and 9 percent plant food. Another 12 crops collected between June 18 and June 30 contained 44 percent animal food and 56 percent plant material. The crops of 3 chicks taken between August 5 and August 25 contained 99 percent by volume plant food and 1 percent animal food, indicating that they are dependent on insects only during the first few weeks of life. Those insects occurring in greatest quantities included sawflies, measuring worms, leaf beetles, tree hoppers, ants, aphids, and stone flies. The most abundant plant items were blueberry fruits, bracken fern, fungi (Agaricaceae), violet and sedge seeds, and strawberry fruits.

No other grouse food habits investigations were conducted in Virginia for nearly 30 years. Then, between 1969 and 1972 we collected 59 additional crops. Thirteen were collected during December, 28 during Jan-

Acknowledgments: The majority of the grouse crops analyzed were generously donated by Mr. David Graney, Dr. David Bramlett, and Mr. Robert Hooper, all U. S. Forest Service employees, Mr. Al Guthrie, coauthor, and Mr. "Skip" Starkey, a graduate student at VPI & SU.

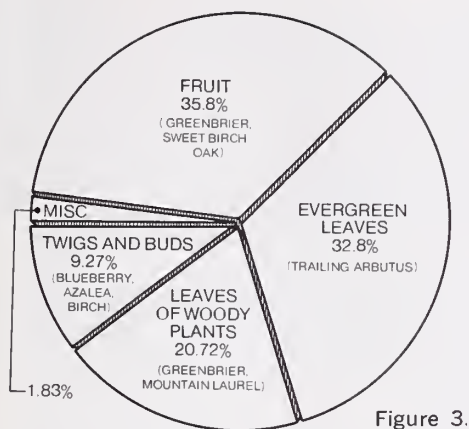


Figure 3.

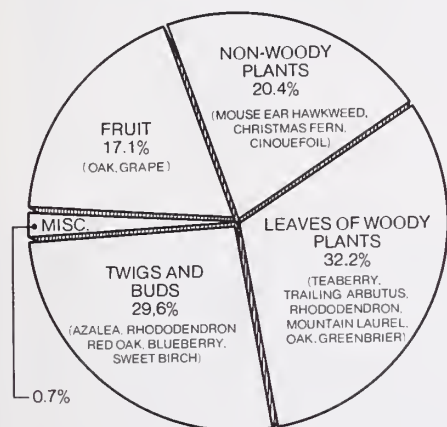


Figure 4.

uary, and 18 in February, nearly all from the Ridge-Valley portion of southwestern Virginia.

Although there were only 13 crops collected in December, the contents compared well with the 185 crops and gizzards analyzed 30 years earlier during the same period. In both collections, fruits, forbs, and leaves ranked in the same order of importance (Figs. 1 and 2).

The same 3 fruits (acorns, grapes, and greenbrier berries) made up the major portion of the diets in both investigations, emphasizing their importance. During January and February as fruits declined, other food items increased in volume in the crops. These were evergreen leaves of trailing arbutus and mountain laurel, herbaceous plants such as cinquefoil, white dutch clover, and mouse-ear hawkweed, and twig ends and attached buds of serviceberry, azalea, blueberry, and sweet birch (Figs. 3, 4, and 5). An interesting deviation from the normal plant diet was found in one of the grouse crops collected in January. It contained, along with the usual plant parts, four red-backed salamanders!

Although mature grouse are more capable of travel than chicks, adult food supplies should be close, abundant, and variable in order to cut down on travel distances, thereby lessening the birds' exposure to danger and conserving their energy. In general, favorable conditions for mature grouse would include hardwood coves with fairly open canopies where an abundance of ever-

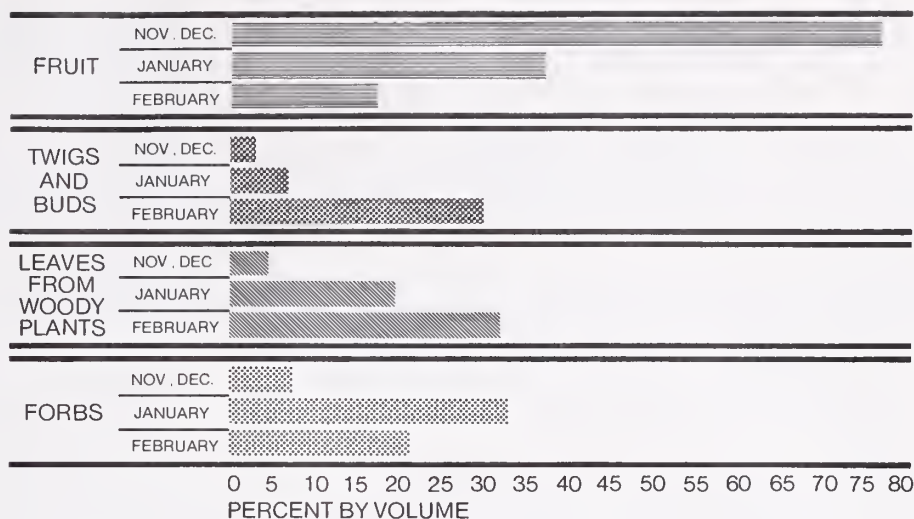


Figure 5.

Fig. 1. Crop and gizzard contents from 185 grouse collected during November and December, 1935 and 1936, from the George Washington National Forest.

Fig. 2. Crop contents from 13 grouse collected during November and December, 1969 to 1972, from Southwest Virginia.

Fig. 3. Crop contents from 28 grouse collected during January, 1969 to 1972, from Southwest Virginia.

Fig. 4. Crop contents from 18 grouse collected during February, 1969 to 1972, from Southwest Virginia.

Fig. 5. Fall and winter changes in major food categories of ruffed grouse from Southwest Virginia.

green and herbaceous forbs are found. Within these stands, small areas with shrubs and vines of viburnum, rhododendron, mountain laurel, grape, and greenbrier would be desirable.

Favorable conditions for broods, based on observations by Stewart (1954), would most likely be found along streams in coves or ravines. He also noticed that grouse had a definite preference for forest edges, semi-shaded clearings, natural forest openings, and secondary roads. Areas of this description support an abundance of herbaceous plants, and woody sprouts and seedlings. Insect populations, which are apparently necessary to very young chicks, would tend to be high in such areas. In late summer, broods move into the dried forest associations on mountain slopes where ripened blueberries are abundant.

Just as the fisherman decides when to fish according to the weather, tide, barometer, etc., the grouse hunter might also use a "habitat barometer." Perhaps this look at grouse food preferences will suggest to the grouse hunter where he might stand the best chance of making a flush this fall. Sorry fellows, we cannot tell you how to hit them.

## LITERATURE CITED

- Nelson, A. L., T. E. Clarke, and W. W. Bailey. 1940. Early winter food of ruffed grouse on the George Washington National Forest. Reprint from the *Virginia Journal of Science*, Vol. 1, Nos. 2 and 3, pages 78-84.
- Stewart, R. E. 1956. Ecological study of ruffed grouse broods in Virginia. *Auk*, Vol. 73, pages 33-41.

# Wild Goose Motel

By BERT LINDER  
*Columbia, Missouri*

**Y**OU'VE undoubtedly seen the travelers heading south for the winter. Probably a confused gabbling in the distance—ronk, haronk, ronk—alerted you. Then, turning and looking far into the afternoon sky you saw the V-shaped line of the flock of migrating geese.

Like all other travelers these geese have to find a place where they can rest and grab a bite to eat. On the James River near Surry is one such spot.

Here the Virginia Commission of Game and Inland Fisheries operates what might be described as a wild goose motel. There are large open fields where the geese can land and rest their weary wings. Corn and grain are available for the pecking. And if a goose were to want to take a swim, he has only to fly to one of the nearby ponds.

All these facilities are provided at the Hog Island Wildlife Refuge, developed by the Commission since 1952 to increase the numbers of waterfowl in the lower James River. Now as many as 10,000 geese and 15,000 ducks may be found on the ponds and fields in the refuge.

Many of these birds can be seen from the main road that passes through the refuge.

From your car window you can watch the flocks of geese and ducks. You will see the ducks on the first ponds you pass along the refuge road. If you watch the ducks awhile, you'll see them tip bottoms up as they nibble on underwater grasses.

As you travel further along the refuge road, you will pass the fields where the geese feed. Often many thousands of Canada geese are in the fields. So long as you stay in the car the geese will continue their feeding and preening. But if you get out of the car, you will soon be the center of attention.

The geese have lookouts posted. As soon as anything unusual happens, the lookouts gabble anxiously. Instantly every goose in the flock is looking straight at you.

If you are fortunate, you might see birds other than the ducks and geese. Often marsh hawks can be seen

sweeping low over the marsh, searching for their mid-day meal. Whistling swans sometimes rest in the pond at the end of the refuge road. The swans have a glistening white body and neck set off by a glossy black bill. Their beautiful color and graceful shape make the swans truly birds of great beauty.

High in the branches of a dead tree in the refuge's first pond you can see an eagle's nest. If you are lucky, you might see the white head and tail of an eagle as he soars above the marsh. During the spring a pair of eagles can often be seen sitting in their nest of sticks high above the pond.

Whether you see an eagle or not, your trip to Hog Island Wildlife Refuge should be enjoyable. From October until the end of January you can be reasonably sure of finding ducks and geese in the refuge. An afternoon visit to the refuge can be combined with a visit to the Surry Nuclear Information Center, located at



Canada geese find Hog Island's accommodations attractive.

the entrance to the refuge where a VEPCO nuclear power plant has been constructed.

The refuge and information center can be reached from Richmond by following Interstate 95 south to Route 10. Continue on Route 10 through Hopewell and Surry. Turn left at route 650 and follow the signs to the Surry Nuclear Information Center. From Norfolk follow Route 17 north to Route 258 and then to Route 10. Follow Route 10 until you come to Route 650. Turn right onto Route 650 and follow the signs. From Williamsburg take Route 31 to Jamestown. Take the ferry across the James River and follow the signs.

# VIRGINIA WILDLIFE



# CONSERVATIONGRAM

Commission Activities and Late Wildlife News ... At A Glance

**SIMMONS NAMED WARDEN DISTRICT SUPERVISOR.** Gerald Simmons, former Assistant Supervisor of the Game Commission's Patrick Henry Law Enforcement District, has been promoted to supervisor to fill the vacancy created by the death of McGuire Morris, Jr., of Powhatan. Simmons resides in Clarksville, where he began his career as Game Warden in 1954.

**ASSISTANT SUPERVISING WARDENS NAMED.** The promotion of seven Virginia Game Wardens to the position of Assistant Supervisor, brings to twelve the number who have been elevated to the newly authorized positions. The promotions were effective September 1, 1972, and are in two different but equal categories. Those promoted to Assistant Supervisory positions for Education included the following: Daniel Boone District, J. C. Wilson, from Area Leader in Tazewell County; J. E. B. Stuart District, R. B. Chenault, from Amherst County Warden; Thomas Jefferson District, D. R. Miller from Area Leader, Bath County; Patrick Henry District, J. R. Bellamy from Area Leader, Chesterfield County; and in the Hampton Roads District, E. E. Walters from Area Leader in Chesapeake. Those promoted to the position of Assistant Supervisor (Law) included: George Washington District, S. R. Stanford from Area Leader, Gloucester County; and in the Patrick Henry District, W. M. Haden, from Area Leader, Fluvanna County. Five promotions to Assistant Supervisor, four in the Law category and one in the Education category, had been previously announced. With the announcement of the new assistants, each of the six Virginia Game Warden Districts has both a Law and Educational Assistant assigned.

**PACIFIC NAMED PRESQUILE REFUGE MANAGER.** The Regional Director of the Bureau of Sport Fisheries and Wildlife's Southeast Region announced recently the assignment of Robert D. Pacific as manager of Presquile National Wildlife Refuge, Hopewell, Virginia. He replaces Paul D. Daly, who has been assigned to Holla Bend National Wildlife Refuge, Russellville, Arkansas. A native of Marlboro, Massachusetts, Pacific received a B.S. degree from the University of Mass. Presquile National Wildlife Refuge is located on a 1,329-acre island in the James River, and is a sanctuary for a variety of waterfowl and shorebirds. As administrator, Pacific will manage the refuge mainly for waterfowl. He and his wife and two children will live on the refuge.

**ENGINEER TRAINING PROGRAM CONDUCTED.** The USDA and the U. S. Department of Labor cooperated recently in a training program to retrain and employ engineers from the aerospace and defense industry to qualify them for careers in construction engineering and inspection in the pollution-abatement and erosion control fields. Their new jobs will include public works construction and bridge projects in the National Forests. Fifty engineers and technicians enrolled in the short, intensive training program held at the University of Washington.

**"BONUS" SCAUP AREA EXTENDED.** The Commission of Game and Inland Fisheries has obtained Federal approval of a greatly enlarged area in which Virginia hunters will be allowed a "bonus" of two extra scaup ducks in addition to the regular daily bag limit during the coming waterfowl season. In addition to including ocean and Chesapeake Bay waters the newly designated area extends up the James River to Jamestown Island, up the York to West Point, and up the Rappahannock to Tappahannock, and includes Virginia waters adjacent the Maryland line on the Potomac up to Chopawamsic Creek at Quantico.

**O**CTOBER is a month of ambivalence, a time of contrast and change. The first frost chills the earth turning bright flowers to dying drabness and urging the carefree greens of deciduous leaves into their autumn splendor. Maples, oaks, poplars, all change into splendid palettes of gold, orange, and red.

October is a personal month, evocative of times past, of people forgotten, and of times changed. To some, the yellowing leaves recall childhood when barefeet gave way to stiff leather and confining socks, and the sweater that was only a burden at noon became comfort when the sun slipped low.

For the outdoorsman, October is a time of transition between the fishing season and the opening of the hunting season. Yellows and golds mean many things for the man who savors the aliveness of slender fishing rods and well-worn walnut of shotgun stocks. There is the yellow of the fly-rod popping bug emitting tiny ripples to lure a purple-masked bluegill upward to smack hard against the intruding bug. But that was in May and June when all was green and the rites of eros made the bluegills pugnacious and daring.

Now it is October and the gold is the dry rustle of corn with the tassels brown and the kernels hard. There in the corn, the hunting season began when the doves came pouring into the harvested field. You remember how it was. First a black speck coming low, then a speck with regularly beating wings, short wings moving fast ahead of white-bordered tail. Over your shotgun, the dove barrel rolled past. Swinging fast, the shot was heard but not felt in the excitement. If you were lucky or very good, the dove turned over in a tiny puff of gray feathers toward the waiting earth. If you were like most, the dove continued only a bit faster and wiser. As the afternoon waned, the sun glowed orange behind shadowed trees as the hunter started home. The game bag was pleasantly hefty, promising golden delight over a charcoal fire. But that would come later; then as the sun continued to ebb, the hunter's thoughts were of the gray birds twisting through the air, and how he felt happy, yet sad, when he stooped to pick a downed bird up from the hard-kerneled field.

Yellows, oranges, golden hues are all part of September. Of all the colors, scarlet stands out most vividly. Scarlet, the red of our blood, our passions, and of the dogwood. For the fisherman who enjoys solitude, the scarlet of the smallmouth bass in October waters is an incomparable experience.

The smallmouth is the king of Virginia's inland waterways. Born of flowing waters, the bronzeback is heavy muscled and eager to do battle with the angler. His general body structure is superficially similar to his oversized cousin, the largemouth bass. When aroused in battle, the smallmouth's greenish bronze body displays livid bars along his sides. The temperament and character of the smallmouth is reflected in his

scarlet eyes. Scarlet eyes that glow in anger when he thrashes high above the water surface to disdainfully throw a hook.

Always high spirited, the bronzeback is even more so in October. As though sensing the ice and snow only a few months away, the smallmouth feeds ravenously. Hellgrammites, minnows, crayfish and the angler's lures are scooped up by the feeding bass. Much of what makes a game fish popular with fishermen concerns the environment where the fish must be sought. A smallmouth bass in a pond would be just another

# OCTOBER

By PET  
Le



A leaping smallmouth below scarlet October leaves is the stuff of fishing dreams.



largemouth with different colorations.

A deep-pooled river with boulders and gravel bars, flowing stream with rocky ledges, deep cold-water lakes—ah, we're in bronzeback country! In these waters, the smallmouth comes from the shadow of a boulder to engulf the lure or fly. At the sting of the hook, the bass is out of the water in a high, clean jump more like a rainbow than a largemouth. Falling back, the smallmouth tears downstream in a drag-screeching run. More jumps, more runs—until exhausted into the angler's hands.

It's October. The morning is chill and the sun seems smaller than in August. Persimmons are ripened to match the forest colors. Deer glide with the morning's frosted mist out of the rich aroma of an overgrown orchard into the surrounding woods. The stream awaits under a canopy of color. The water runs low and clear. Insect life is not so prevalent now. Even the common water snakes have disappeared with the cold nights.

There's no need now to rise at daylight to meet the bass before August heat sends them in pursuit of coolness and shade. As the October sun rewarms the chilled

fish, and, best of all, hellgrammites. I prefer an ultralight spinning outfit, with four pound test as a hedge against a possible citation-sized bronzeback.

Productive lures include small surface disturbers—like the tiny torpedo, 7s rapalas, tiny silver rebels, and flatfish. Perhaps the most effective lure for stream smallmouth is a black “doll fly” jig, either  $\frac{1}{8}$  or  $\frac{1}{4}$  oz. twitched slowly around submerged rocks or parallel to rocky ledges. The jig should be tipped with a piece of plastic worm about  $1\frac{1}{2}$  inches long with the tail split to wiggle freely on the hook. Purple, red, and black seem to be preferable in that order. This jig-worm rig apparently derives its effectiveness from its close resemblance to a hellgrammite or crayfish.

Now we're in the water moving carefully upstream. In spite of assertions to the contrary, experience has shown me the value of moving upstream rather than down. Moving water makes lure control difficult; therefore, the shorter the cast, the better the control. It's not uncommon to hook smallmouth only ten feet away if you're wearing drab clothes and staying low to the water. Leaves have begun to fall, providing sound advice for the fisherman: The drifting leaves reveal the path that food may take in the current. Work your lures in places where leaves are trapped in an eddy behind a rock, or where leaves swirl slowly in between or adjacent to faster currents. These in-between areas are prime spots for smallmouth.

As the afternoon progresses, we've hooked six and lost a dozen high-jumping smallmouth. It's warm now under the sun streaming through the multi-colored filter of trees. Around a turn in the stream, a wood duck drake splashes into the air, green feathers erectly indignant.

All too soon, the sun is lower, the air cooler. The water that felt cold earlier is now warm as the evening chill begins. One more pool, then we'll call it a day. The pool is a large one, leaves float in golden swirls with dark water below. Plop, the black jig makes its tiny noise of entry, sinking toward the gravel bottom. Turning the reel handle slowly, I gently twitch the tip of the light rod. Then there is a familiar tap, followed instantaneously by a solid weight on the line. Quickly setting the hook with a sharp lift of the rod tip, I lean back into my waders to watch the show. Three pounds of lean, bronzed muscle hang upside down above the pool. Two bass in October's dying light, one alive and mean above the water, the other shimmering and unreal on the broken surface of the water. Then with a splash, the two are again one. Another jump sends the black jig flying empty back toward the abruptly straight rod. I shudder briefly, the hair stiff on my neck, from the chill, or perhaps from I know not what as the golden and scarlet leaves drift slowly down. Somewhere in the pool below, a scarlet-eyed smallmouth returns to the shelter of his rock.

# SCARLET

ELKINS  
gton



The world is crisper, cleaner somehow, along an October stream where the water is cold, dark and low.

waters, the smallmouth will begin his prowls. Come with me now as we spend an October day with the scarlet-eyed smallmouth.

The water is cool, swirling clear and heavy against waders. If you fancy the flyrod, then indulge yourself. Try small popping bugs or, better yet, rubber legged bugs. The smallmouth doesn't like as much surface fuss as does the largemouth. Dark-patterned streamer flies or the always effective “muddle minnow” streamer will all produce. Are you a live bait advocate? If so, the smallmouth will cooperate with minnows, small cray-

THE "blackcoats" are coming!

Like hordes of miniature fighter planes, thousands of starlings attacked the peace and tranquillity of Radford, Virginia, this past winter. Overhead huge piping swarms descended at dusk upon the three-acre plot of pines used by the birds for their roosting sites. The repugnant odor of their droppings set the townsfolk on edge.

These winged pests, estimated to have increased a million-fold since the early 1890's when 120 *Sturnis vulgaris* were introduced to this country via Central Park, New York City, have gained not only state notoriety, but nationwide attention. A couple years ago, for instance, CBS News featured the problems of Scotland Neck, North Carolina, which has been besieged by blackbirds and starlings.

From the beginning starlings, native of Europe and western and central Asia, "took" to the U.S.A. By 1900 they had spread to Connecticut and New Jersey and by the 1940's even California became the reluctant host to this gregarious bird, which has also adopted Canada, Mexico, Australia and New Zealand as their new homes.

During the 1920's the growing numbers of starlings in the U.S. precipitated the formation of a panel to assess the effect of this bird on the country. The panel reported starlings to be more beneficial than harmful because they ate troublesome grubs, such as the wireworm.

But that was 50 years ago. Like the American citizen, the starling continued to grow in number; and more and more of them have moved to the towns and cities, roosting on ledges and window sills. Such famous sites as London's St. Paul's cathedral and Trefalgar Square have been plagued by these stocky, short-tailed nuisances. Occasionally starlings have perched in such great numbers on the big hand of Big Ben that they have stopped the clock!

Today the starling has earned a bad reputation. The bird is noisy and its obnoxious droppings are messy, encouraging the spread of such contagious diseases to humans as encephalitis, ornithosis, and histoplasmosis. Virginia farmers complain most about starlings eating their poultry, hog and cattle feed. The bird also has been known to be an agent in the transmission of hog cholera and other swine diseases.

Despite its nettlesome nature, one must admire one thing about the starling—its cohesiveness in flight. Each ebony dart, absorbed in a flock, banks, turns and twists in unison with its neighbor, without any apparent leadership or sign. The bird seemingly yields part of its individuality in an orgy of social facilitation.

One of the wonders of nature is the precise fluctuations of movement seen in large starling flocks.

"I've seen flocks more than a mile long change direction in unison," related Glenn Dudderar, extension



## VILLAIN

By BILL WEEKES  
*Blacksburg*

ornithologist at VPI&SU, Blacksburg. "If the birds were merely following their companions in front of them, you would expect to see a wave or ripple beginning at the head of the flock and extending to the rear as each bird follows the movements of those in front of them. But you don't see this. The whole mile-long flock changes direction at one instant."

It is as if some extra-sensory perception triggers a whole body of birds to move in a certain direction at a precise moment in time.

There are other fascinating features that characterize starling flock movements.

"Some flocks remind me of an amoeba you might see under a microscope," Dudderar described. "A part of the flock will move out forming a foot, and then the body will swarm up into the foot and bulge out into a body again. Then there will be another protrusion of the body forming another foot."

Many texts make note of the survival advantage of this collective behavior, especially when these birds are being threatened by a falcon overhead. When under such an attack, the starlings close ranks forming a dense knot. A falcon, which may descend on its prey at 200 miles an hour, will think twice before smashing into this "brick wall" at such a speed.

The social cohesiveness of starling flocks is a prime reason why starlings have been able to adapt so well to their comparatively new environment here in this country. Other causes of its success in the U.S. have been pinpointed—its adaptability in using nesting sites, its wide diet, its pugnacity toward other species and its tightly controlled family life (especially with offspring during times of danger).



## IN BLACK

But none of these causes are as dramatic as the bird's tendency toward togetherness. In numbers there surely *is* strength for the starling. What exactly goes on inside a bird making it so gregarious has been a question behaviorists have taken great pains to try to explain.

With the space available, one can only hope to present a flavor of the intricacy involved in pinning down an explanation of why some species are gregarious.

J. H. Crook, in discussing the basis of flock organization (Thorpe 1961), commented evidence was good to conclude there is an "independent social motivation"—a Social Tendency—in birds of certain species to strive to be with other members of their own species. This doesn't necessarily mean, Crook said, that the motivation is unlearned or instinctive.

Crook stated that once a bird flock comes into being, it is maintained by certain social mechanisms. These mechanisms act as response mechanisms which reenforce a degree of synchronization of activity between birds in a flock. Thus, in the flying activity between birds in a flock there seems to be a "following reaction," in which one bird follows the movements of others and thus moves more or less synchronously with them; and a "social facilitation," an immediate copying of the behavior of one individual by another. Interacting within these responses is the social tendency to keep close to other individuals. Crook stated the "following reaction" is usually a direct reaction to a precise pattern of stimuli such as a sudden exposure of wing flashes or the sound of flight cries.

Not only flock cohesiveness, but starling roosting habits indicate a survival advantage. Starlings are better able to survive the rigors of cold winter nights by conserving heat, and the best way this is done is by birds bunching up near one another on the roost.

Starlings roost in trees. Observations have confirmed the fact that an individual starling tends to roost on the identical spot on the same branch each night.

Fred J. Brenner (1965), in studying the metabolic rates and survival times of roosting starlings, found starlings survived longer during the low temperatures of winter when grouped together than when roosting alone. The metabolic rate of a bird roosting singly was significantly higher than the rate of birds roosting in pairs or in groups of four during the winter.

"The starling does not possess a physiological adaptation for cold," Brenner wrote. "Therefore the species may have evolved a behavior adaptation of flocking to reduce heat loss and maintain its metabolic rate at the roosting level."

Thus "togetherness" in the winter may well be rooted to the need to conserve energy.

But the very need to conserve energy must be predicated on the need to get energy in the first place. Hence, we flip to the other side of the coin. We ask: If starlings gain survival by flocking together at night, could not this crowding work to a disadvantage when the competitive need to find food raises its hoary head at dawn?

The answer is "yes."

To get food birds must "split" from the roost area. Because of the identical nature of their requirements there *is* competition between starlings for food in the winter. J. C. Welty (1968) writes that competition is the rule most likely to govern relations within aggregations of birds, particularly if the different individuals require the same essential elements from the habitat.

"Intraspecific competition, in short, stimulates individuals to explore, penetrate and adapt to marginal and eventually new and different habitats," Welty disclosed.

Such competition, as with starlings, encourages, then, the dispersal of the population outwardly from the roost site, or "core," as W. J. Hamilton III et al. (1967, 1969) terms it in his papers discussing starling roost dispersal.

Hamilton (1967) proposes that starlings, in aggregates, will disperse radially from the core area. The numbers of starlings foraging will be less concentrated as the distance from the core area is increased. In other words, the numbers of individuals per unit area of forage space declines as one moves further afield from the roost.

Depending on the population size of the roost, starlings may travel as far as 60 miles from the core before intraspecific competition has relaxed enough so that food may be easily obtained.

Hamilton states that starlings follow a strategy—comparing and modifying alternative courses of action that would best suit their energy requirements. Those birds, as the idea goes, pushing further afield will be

(Continued on page 19)

## THREE BRIGHT BERRIES

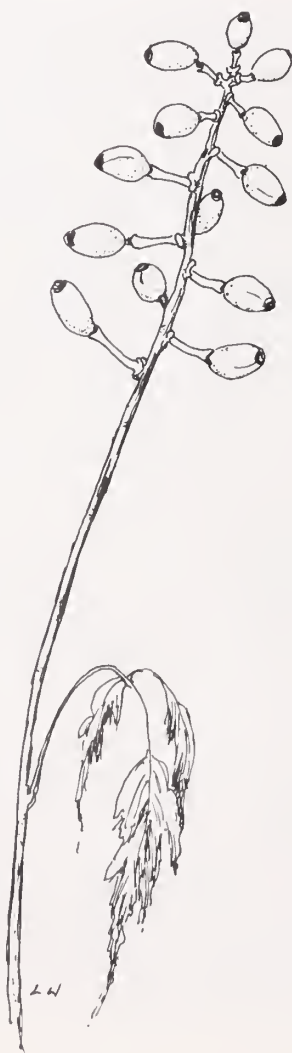
By ELIZABETH MURRAY  
Charlottesville

Illustrated by Lucile Walton



*Gaultheria procumbens* and *Mitchella repens*.

*Actaea pachypoda*.



**O**CTOBER is the month when thoughts about the countryside tend to turn away from flowers and start to dwell on fruits. One remembers Keats:

"Seasons of mists and mellow fruitfulness

Close bosom'd harvest of the maturing sun . . ."

All around in the woods and fields, flowers are aging and falling, their places taken by swelling and ripening fruits of all kinds, optimistic tokens that next year's generation of plants is already being planned. It might be interesting to consider in some detail three small plants, not closely related to each other, but all found in the Virginia woods, and all more noticeable when they are bearing berries than when they are blooming.

True wintergreen, *Gaultheria procumbens*, is not in fact a member of the "wintergreen" family (Pyrolaceae) but belongs with the heaths in the Ericaceae, the family which includes the azaleas, rhododendrons, mountain laurel and blueberries. *Gaultheria* is one of the smallest representatives of the family. It is an evergreen perennial which only grows a few inches high. The specific name '*procumbens*' means 'lying flat' and must refer to the creeping, underground stems; the little shoots which are sent above ground from the stems are upright. The genus *Gaultheria* was called after an eighteenth century naturalist Jean François Gaultier who was also court physician in Quebec. The wintergreen flower is shaped like an urn, a form characteristic of quite a few members of the heath family. The flowers are white and nodding, blooming in midsummer. After they have bloomed, ovary and calyx together enlarge to form a bright red fleshy berry, and it is this which will catch one's eye on the floor of the woods in the fall. Wintergreen leaves are very aromatic with the well known "oil of wintergreen" flavor, and many people enjoy making tea from them. Alternative names for this little plant are teaberry, checkerberry, mountain tea, ivy leaves and in French Canada 'petit thé du bois' (little tea of the woods).

Another bright red berry which may be found close to the forest floor at this time of the year is the partridge-berry. This is not at all closely related to wintergreen but belongs to the Rubiaceae, a strange family whose other common representative around here is the bluet. The stems of partridge-berry, or *Mitchella repens*, are prostrate and above ground, with pairs of small, round, opposite leaves

at intervals along the stems. In the axils of the leaves are little white, trumpet-shaped flowers which are always in pairs and have a pleasant, fragrant smell. After the flower has bloomed, the two ovaries fuse to form a single red berry at the top of which can be seen the remains of each calyx. *Mitchella* also commemorates an eighteenth century botanist, this time one who lived in our state. Dr. John Mitchell was probably born in England but came to Virginia in the 1720's. He lived at Urbanna where he was the official physician to the poor of Middlesex county. He was very much interested in botany and zoology, studying in particular the habits of the opossum and the natural history of the local trees. He wrote a long treatise on Virginia pines. He corresponded frequently with Linnaeus, who later named the partridge-berry after Mitchell in recognition of the latter's services to botany.

*Actaea pachypoda* is known variously as white baneberry, white cohosh, necklace weed and doll's eyes. The last name refers aptly to the berries which are pure white, tipped with black or deep purple dot, and borne on a brilliant red stalk. *Actaea*, which belongs to the large buttercup family, the Ranunculaceae, occurs in rich woods and thickets throughout the state. Each stem bears a cluster of small, somewhat uninteresting white flowers which bloom in May and June. Then from July to October come the bright berries. Both stalks and fruit are green at first, but as they ripen they assume their brilliant contrasting colors which are an unmistakable sight in the woods. The name necklace weed must not be taken too literally for the berries are, in fact, poisonous.

So there is really no need to feel depressed that the summer is on its way out. There is still plenty of interest in the woods. Those who want a change from the fall colors of the leaves can try looking down at their feet to see what plants are producing attractive fruits at that level!

Annual  
GOVERNOR'S  
CONSERVATION  
ACHIEVEMENT AWARDS  
BANQUET

HOTEL  
GOVERNOR DINWIDDIE

Portsmouth

October 21, 1972

Reception 5:45 p.m.      Dinner 7:00 p.m.

VIRGINIA WILDLIFE FEDERATION  
NATIONAL WILDLIFE FEDERATION  
SEARS ROEBUCK FOUNDATION

## Villain in Black

(Continued from page 17)

rewarded for the extra energy and foraging time lost. Reduced competition will enable these birds to find more food.

Such behavior, rooted in resource acquisition, makes it necessary for starlings to maximize the efficiency and rate of energy gain. Energy expended must be compensated by same amount of energy acquired. These are decisions the birds must make. Starlings may take several in-transit stops during their flights from the core. They may "case out" particular areas in an attempt to discern their potentiality for energy reserves. Even during these daylight missions for food, starlings will travel in flocks. This pooled experience makes resource evaluations more efficient. Again, the survival value of aggregation is manifested.

Of course, success in choosing forage areas greatly depends on external happenstance—ground cover in areas of snow, temperature at the roost and elsewhere and long-term competition. If strategies go awry, resulting in net energy loss for all individuals of a roost population (as in over-exploitation of resources), then there can be only two results—starvation or roost abandonment.

Breaking up roosts and eliminating concentrations of starlings from the Virginia countryside is the "bag" for such extension workers as Dudderar. Complaints have come to him from farmers who say these birds are eating up their animal feed.

"We've had calls from Rockingham county where poultry are raised, from southwestern and northeastern beef sections and from the swine producing areas out east," Dudderar stated.

He estimates 1,000 starlings can eat as much as 64 pounds of feed a day. In Rockingham county Dudderar found a turkey yard where starlings were eating an equivalent of what the turkeys themselves were eating—that is, 200 pounds a day!

Dudderar has worked on as many as nine roosts in an attempt to bust them up. He has experimented with three techniques and will try a fourth technique when the weather starts to turn cold next fall.

One of the places where the new system might be used next winter is in Opal, Virginia, in Fauquier county. There a winter roost is occupied by a half-million birds. Dudderar calls it the worst situation of its kind in the state.

## REFERENCES

- Crook, J. H. 1961. The basis of flock organization in birds. In W. H. Thorpe, O. L. Zangwill eds. *Current Problems in Animal Behavior*, pp. 125-149. Cambridge University Press.
- Hamilton, W. J. III, W. M. Gilbert, F. H. Heppner, and R. J. Planck, 1967. Starling roost dispersal and a hypothetical mechanism regulating rhythmical animal movement to and from dispersal centers. *Ecology* 48: 825-833.
- Hamilton, W. J., and W. M. Gilbert. 1969. Starling dispersal from a winter roost. *Ecology* 50: 886-898.
- Brenner, F. J. 1965. Metabolism and survival time of grouped starlings at various temperatures. *Wilson Bulletin* 77:388-395.
- Welty, J. C. 1968. *The Life of Birds*. Alfred A. Knopf, Inc. New York, N.Y. 546 pp.

# The Big Powhatan Buck

By MAX CARPENTER  
*Game Biologist*

IT is true, some hunters may have to "work" for their deer, but for others the job has been amazingly simple—more so than they would admit to their wives back home. This was not the case with Mr. William Schaefer who lives in Powhatan County, Virginia, for his wife was right behind him when he shot his prize winner. Recently I visited his farm to get a picture of his deer and details of the hunt.

Bill farms the old Lee Palmer place four miles south of the town of Powhatan, Virginia. When Bill first moved there, he was usually too busy with the harvest to think about hunting deer. Furthermore, the hunting rights had been leased to the Genito Hunt Club and its members had used the farm several years for their deer hunting. During the 1969 deer season, the hunt club lease was not renewed and consequently only a few hunters were permitted on the farm.

With the hunting pressure thus reduced, there was a noticeable increase in the number of deer on the farm and several nice bucks were seen during the summer of 1970. When deer season came in that fall, Bill had his work caught up and thought he would try his luck. And lucky he was. The first deer he killed was a nice six-pointer. (Two deer per year are allowed in Powhatan County.) Then on the morning of December 11, 1970, Bill was eating breakfast with his wife and four children when a neighbor stopped by on some business. When he left the house and started out the road, he saw a big deer with white glistening antlers crossing the adjacent field, so he quickly backed up and told Bill to get his gun. There was some real excitement around the Schaefer home about this time. Bill edged out to a tree in the corner of the yard and put the crosshairs of his scope on the deer, about 175 yards distant. When the rifle cracked, the buck made a couple of jumps toward the pine woods and then dropped. The grass was frosty and the children were in their stocking feet but when the deer went down, they pulled off their socks and ran barefooted across the field to see him.

In the fall of 1971 the Powhatan buck easily won first place in the eastern trophy show at Newport News, sponsored by the Eastern Peninsula Sportsmen's Association. The same evening he won out over all entries from the western counties, taking first place in the state contest sponsored by the Game Commission. With a score of 251 6/8, it ranks third in the all-time state records and may gain a place in the national Boone & Crockett records.

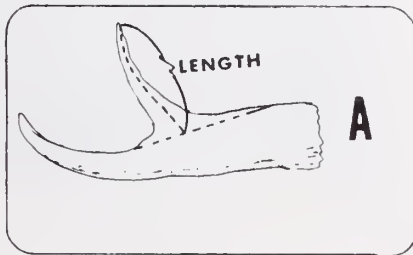
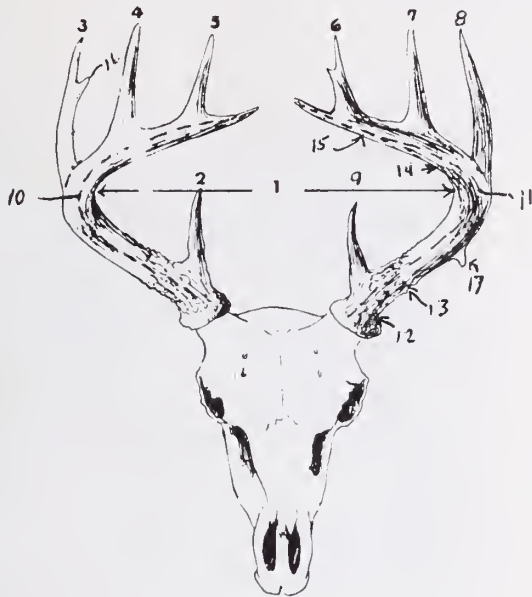
## 1971-72 Big Game Harvest

County or City	1969-1970			1970-1971			1971-1972		
	Deer	Bear	Turkey	Deer	Bear	Turkey	Deer	Bear	Turkey
Accomack	96			103			92		
Albemarle	417	14	24	377	22	22	531	19	14
Alleghany	801	8	280	852	39	203	922	29	202
Amelia	511		24	789		33	977		35
Amherst	185	8	26	187	9	17	244	11	16
Appomattox	264		15	286		9	324		8
Augusta	1,245	51	468	1,221	21	539	1,270	54	296
Bath	1,962	10	651	1,881	16	692	1,777	15	436
Bedford	103	13	5	136	9	8	156	11	9
Bland	224	10		221	2	0	251	1	32
Botetourt	946	13	290	922	31	233	1,004	28	228
Brunswick	412		8	297		10	341		9
Buchanan						44			
Buckingham	756		55	1,324	2		1,547		34
Campbell	42		9	63		5	86		6
Caroline	1,256		25	1,325		30	1,743		42
Carroll	32			34		0	54		
Charles City	367			489		0	708		
Charlotte	73		11	61		14	110		14
Chesapeake-Norfolk	228	4		198	8		222	9	
Chesterfield	405		21	651	0	31	712		36
Clarke	103			71			104	2	
Craig	871	4	196	873	7	174	786	8	147
Culpeper	120		5	158		12	184		7
Cumberland	481		26	745		22	992		35
Dickenson	6			6			10		
Dinwiddie	434		19	779		30	932		22
Essex	169			156		0	114		2
Fairfax	22		3	3		2	15		1
Fauquier	373		41	403	0	32	450		41
Floyd	31			31		0	38		
Fluvanna	925		15	987		9	1,205		15
Franklin	60			88			110		1
Frederick	596	1	245	511	1	226	703	1	272
Giles	600	7	260	521	4	144	520	6	140
Gloucester	261			239			232		8
Goochland	263		20	303		16	474		
Grayson	296			360		0	365		33
Greene	35	18		58	19	0	44	17	2
Greensville	255			317		0	402		5
Halifax	130		13	139		14	153		13
Hanover	123			193		0	196		
Henrico	110			133		0	229		
Henry	2			1		0	5		
Highland	897	14	408	780	7	439	852	9	224
Isle of Wight	322			398		0	435		
James City	234			223		0	271		
King & Queen	277		12	288		26	291		12
King George	398			304		0	287		
King William	372		4	416		12	446		11
Lancaster	293			228			291		
Lee	38			65			46		
Loudoun	247		17	228		13	338		20
Louisa	270		23	472		28	591		13
Lunenburg	132		7	126		9	166		3
Madison	25	13		34	21	0	38	24	
Mathews	57			65			24		
Mecklenburg	55			79		2	97		0
Middlesex	78			84			81		
Montgomery	38		134	41	0	91	73		71
Nansemond	318	1		286	4	0	308	16	
Nelson	123	9	9	159	13	25	187	9	15
New Kent	348			449		0	657		
Newport News-Hampton	211			213		0	201		
Northampton				000	00	0			
Northumberland	337			309			338		
Nottoway	324		6	595		4	733		11
Orange	144		15	167	0	13	201		10
Page	285	9	52	312	14	48	339	7	25
Patrick	185	1		180	0		219		
Pittsylvania	106		13	133		17	163		11
Powhatan	423		21	689		26	841		20
Prince Edward	143		9	188		10	194		13
Prince George	392		6	803		9	867		6
Prince William	342		25	460		24	349		29
Pulaski	128			124	3		135		22
Rappahannock	347	2		207	9	0	194	6	7
Richmond	183			198			240		
Roanoke	19		57	25	1	22	27		32
Rockbridge	724	8	333	728	9	246	711	11	224
Rockingham	1,595	43	231	1,593	29	299	1,701	34	226
Russell	23			11			27	3	0
Scott	70			54			52		
Shenandoah	877	2	307	826	9	235	1,048	9	261
Smyth	302	5		314	3	0	342	3	27
Southampton	1,742			2,153		0	2,063		1
Spotsylvania	266		17	260	1	15	472		19
Stafford	404		5	712		10	409		13
Surry	640			743		0	714		3
Sussex	1,067			1,280		0	1,190		15
Tazewell	76	9		55	5	0	71	6	9
Va. Beach	27			30		0	30		
Warren	375	2	68	338	7	59	409	3	92
Washington	133			97	0	0	118	1	6
Westmoreland	124			119			116		
Wise	20			16			29		
Wythe	307	4		343	1	0	413	9	51
York	700			646		0	600		

TOTALS 34,154 283 4,534 38,138 326 4,253 42,369 361 3,663

Turkey harvest figures do not include spring kills.

# How Does That Trophy Rate?



EACH year there are a number of impressive deer heads that are not entered in the State Trophy Contest because the persons who killed them feel they will surely be nosed out by a larger specimen. Consequently, one or more divisions are won by mediocre heads when larger racks are known to have been killed. In a true contest it is impossible to set up minimums for entry because average quality and number of entries varies markedly from year to year. The following procedure is recommended as a rough test for a prospective entry but is by no means intended to discourage entry of heads which do not measure up to these standards. All heads must be measured by an official measurer at the contest for final score.

To estimate the score of your head, add together (all measurements to nearest 1/8 inch) the spread of the main beams (1) plus the number of points plus the length of all points and random prongs (2-9, 16 and 17—See insert A) plus the length of both main beams (10 & 11) and the circumference of both antlers at the burr and between all points (12-15). After totaling all these measurements and counts, subtract half the length of all abnormal points (such as 16 & 17) and one-half the difference between corresponding length and circumference measurements on one antler and those on the other.

If the rack scores 225 or better, have it officially measured for Boone and Crockett competition. (Max M. Carpenter, Route 1, Dayton, Virginia, is official measurer.) If it has 9 or more points and scores 150 or over, or if it has 7-8 points and scores 100 or over, or if it has 6 or less points and scores 50 or over, it has a good chance of placing in the Game Commission's Big Game Trophy Contest.

The contest was started in 1941 and has been held annually since. Heads are first judged in regional competition at Harrisonburg or Newport News. The state contest is held in conjunction with one of the regional events alternating between eastern and western sites. Heads must be killed during the previous season to be eligible and the entrant must furnish the Big Game tag or an affidavit from the game warden certifying the entry as a legal kill.

1972

## State Big Game Trophy

- There are no advance entry forms. Heads or antlers must be carried or shipped to the proper regional contest where they will be officially measured and entered. Bear skulls only need to be entered in state contest. Turkeys are scored by length of wing, tail, and beard.

- Prizes for regional winners
- Trophies for first place State winners in each Division
- plus Honorable Mention Certificates

DEER  
BEAR  
TURKEY



## Contest

The east-west regional dividing line will follow the east-west deer season line in effect the year the entry was killed.

### WESTERN REGIONAL CONTEST

October 19, 20, 21  
Fair Grounds  
Harrisonburg, Virginia

For entry details contact

Roy W. Heishman  
Harrisonburg, Virginia  
Phone: 434-9957 (B); 434-2496 (R)

Sponsored by the  
Harrisonburg-Rockingham  
County Izaak Walton League

### STATE CONTEST

October 21  
Fairgrounds  
Harrisonburg, Virginia

Virginia  
Commission of Game and  
Inland Fisheries

(Heads must be physically present to win.)

Only animals first entered  
in regional competition are  
eligible

### EASTERN REGIONAL CONTEST

October 7  
Deer Park Elementary School  
Routes 143 and 17  
Newport News, Virginia

For entry details contact

Robert L. McDaniel  
39 Glendale Road  
Newport News, Virginia  
Phone 878-3692 (B); 596-6785 (R)

Sponsored by the  
Virginia Peninsula Sportsmen's Assn.

# Know Your BIOLOGISTS

Text and Photos by F. N. SATTERLEE  
*Information Officer*

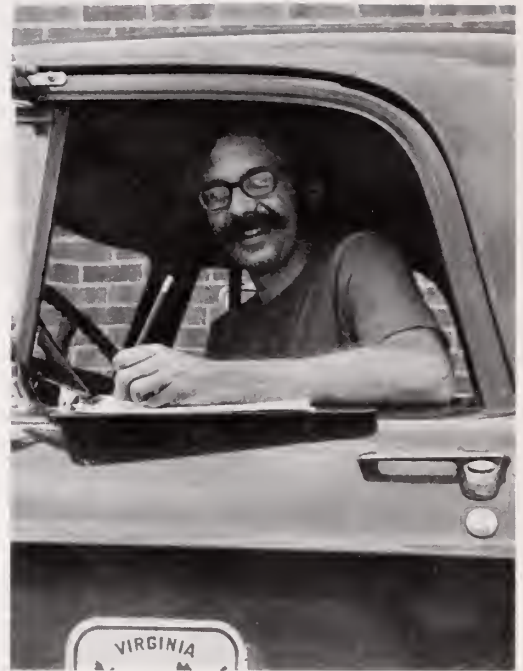
## JOHN W. KAUFFMAN *Fish Biologist*

Trenton, New Jersey, was the birthplace of John Kauffman; however, while he was still a small child, the family moved to Arizona in connection with his father's work. He completed his schooling, through the 9th grade, in Tucson, Arizona, and the family moved again—this time to Escondido, California, where John graduated from high school.

He attended Palomar Jr. College for two years and received both his B.S. in fisheries and an M.S. in biology from Humboldt State College in Arcata, California. Following receipt of his graduate degree in April of 1971 he joined the Virginia Game Commission and was assigned to the Shenandoah River and middle James River areas as a research biologist.

His greatest desire in connection with his work is in hoping that he can preserve something of the outdoors and wildness for future generations. He feels that the most important aspect of this is the preservation of smallmouth bass and trout streams which he considers so much in jeopardy due to man's activities along stream fringes.

John's parents, Mr. and Mrs. John Kauffman, make their home in Woodland, California. He, at least at the time of this writing, is a bachelor and lives in Charlottesville.



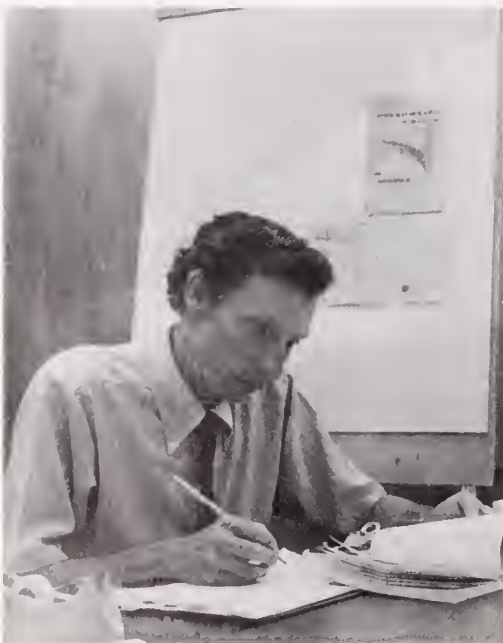
## FIELDING F. TANNER, JR. *Fish Biologist Assistant*

Fielding F. Tanner, Jr., was born in Edenton, North Carolina, but from the time that he was two years of age and until he was a young teenager he lived in Whitfield County in Georgia. At this point in his life the high school in his community was destroyed by fire, and he returned to Edenton to live with his grandmother and complete his schooling in the town of his birth.

It was during these early years of his youth that he became interested in freshwater fish and hatcheries, for his father was a fish hatchery manager for the U.S. Department of the Interior. Young Fielding literally grew up in the business and he loved being part of it and working outdoors.

He attended Mars Hill College in North Carolina, majoring in biology and for a time worked with the U.S. Fish and Wildlife Service in Cheraw, South Carolina, at the warm-water hatchery. Later he worked at the cold-water hatchery in Erwin, Tennessee, and in July of 1964 joined the Virginia Game Commission as a fish biologist assistant.

His greatest satisfaction is working with the public and being out-of-doors with nature. Currently he is involved in fish management and is assigned to the Commission's warm-water hatchery at Stevensville, Virginia.



enjoy quality wildlife in quality natural surroundings is an American birthright—and a considerable part of the American dream.

Conservation of nongame wildlife has special meaning because it is everyday wildlife. It includes species that are adaptable to cities and suburbs if given half a chance: animals that can be enjoyed in the back yard, at the bird feeder, or in local parks and public gardens.

Another thing: if there's one lesson learned from a half century of game management, it's that quality wildlife is the truest indicator of quality natural environment. You won't see a Baltimore oriole or an indigo bunting in the slums of the Inner City: such habitat is occupied by house sparrows, rats and starlings. Orioles and indigo buntings are fussy about environment. They are originals, and they demand something of original quality where they live. And as they are biological indicators of quality in their world, so they also indicate quality in ours. If there are fewer songbirds in our suburbs today, it's because the environment for birds has been degraded there—as well as the environment for children.

If we need more "practical" reasons than those for conserving nongame wildlife, there are some:

There was a time when all of our domestic animals and plants were wild stock. Certain wild grasses became corn, wheat, rice and sugar cane. Bison were bred to become cattle; junglefowl to be Leghorn hens; wolves into man's best friend. All of man's domestic foods and animals had wild beginnings, and were once parts of original environment.

No man can say that today's "unused" wildlife may not have incalculable value in the years ahead. Not long ago, it was found that something in the blood of abalones is tremendously effective against certain staphylococcus bacteria of the types that are building immunity to our best antibiotics. Recently, a rare desert plant in the Southwest was found to contain a strange wax with an extremely high melting point, useful in hardening certain lubes for heavy machinery. Until 1929, *Penicillium* mold was simply crud that formed on spoiled bread—and it has since become one of man's supreme blessings. The guinea pig has been a crucial ally in our war against disease, and the fruit fly *Drosophila* has shown us things about genetics that echo through our daily lives.

Every living thing on earth is unique. Once gone, it can never be replaced. It is part of what scientists call "the genetic pool"—the great reservoir of life on earth. Evolution, and unknown combinations and mutations of genes within that reservoir will certainly produce forms of life in ages to come that we cannot know about now. As passengers on this spaceship Earth, we'd be foolish to wipe out any of our shipmates. They will at least make our voyage less lonely as we drift through

the endless, lifeless reaches of space—and they probably will make us wiser and better, as well. Many years ago, a naturalist named William Beebe wrote:

*"The beauty and genius of a work of art may be reconceived, though its first material expression be destroyed; a vanished harmony may yet again inspire the composer; but when the last individual of a race of living things breathes no more, another heaven and another earth must pass before such a one can be again."*

Millions of Americans know this, and long to be part of a movement to prevent it. But they have always lacked ways and means to do so. They do not wish to buy hunting and fishing licenses that they will never use, and why should they? Besides, their main interest may be in nongame wildlife, not game species. Yet, there is no way for the average, nonhunting citizen to engage in general wildlife conservation programs.

This has concerned game managers and biologists for a long time—and that concern has now jelled. Through the International Association of Game, Fish and Conservation Commissioners, and The Wildlife Society, a model law for nongame wildlife conservation has been developed. Carefully designed by conservation administrators and legal counsels in the field, it is a workable, practical blueprint for expanding a state's game management efforts into nongame wildlife conservation.

The adoption of such a program could have repercussions all through the citizen environment—not only giving the average man a real piece of the conservation action, but providing a launching pad for a whole new system of environmental involvement.

No one method of funding this nongame wildlife and endangered species act will fit all states. However, it is widely agreed that funding must come from sources other than fish and game funds. Historically, this concept was part of the American Game Policy of 1930, a landmark in American conservation that recognized the nonshooting protectionist and the scientist "as sharing with the sportsman and landowner the responsibility for wildlife conservation, with public funds from general taxation to better wildlife as a whole and the sportsman paying for all betterments serving game alone."

Once passed, an Act for Wildlife could be quickly put into gear. The basic, highly refined techniques of game management can be effectively applied to the problems of nongame wildlife conservation. Manning the program with premium talent is no problem: there is a corps of trained wildlife managers and biologists available—young, concerned, and desperately eager to help put such programs into action.

So all the elements for effective action exist: a critical public need, the techniques, knowledge, and trained men and women to meet that need, and equitable ways to provide the necessary funding.



Edited by HARRY GILLAM

### TV Version of Hunter Safety Course



WHRO-TV photo

Hunting and firearms safety are featured on a new series of television programs being aired each two weeks from August 31 through mid-November over WHRO-TV public television in Norfolk, Va. Ron James, left, producer of the show, is shown on the set of the first in the program series. In the center is Chesapeake City Game Warden H. E. Kingery, and on the right James Kerrick, Safety Officer of the Virginia Commission of Game and Inland Fisheries.

The first major in-depth study of hunting and firearms safety done by a Virginia television station is being presented by WHRO-TV, public television in Norfolk. The series, entitled "Sporting Safety," began August 31, 1972, and will be presented every two weeks through mid-November.

Producer Ron James of WHRO-TV, Channel 15, described the series as being "a TV version of the hunter safety program given by the Virginia State Commission of Game and Inland Fisheries, but more informal. We intend to supplement the state's certification program for hunter safety in this series."

The programs include educational panel discussion supplemented by film provided by the Virginia Game Commission. The panel includes Ron James; Bill Reid, one of the more than 500 volunteer Hunter Safety Instructors who are certified by the Game

Commission; Jim Kerrick, Virginia Game Commission Safety Officer; and Elmer Walters, Assistant Supervising Game Warden for the Hampton Roads District. In order to familiarize the public with the purpose of game wardens, and with some of them as individuals, a warden from different areas of the state will be invited to appear on each program.

"The series will present the facts of hunter safety to a novice hunter in an enjoyable, but informative way," Ron explained. "We will show, not only what should be done, but how and why." Each program will include five minutes of panel discussion, twenty minutes of instruction, and a synopsis at the conclusion.

The opening program featured various police chiefs in the tidewater area with their suggestions on program content.

"The reason for this is to demon-

strate the 100% backing we are getting from local police as well as the State Game Commission, the National Rifle Association, and major firearm manufacturers," the producer stated.

Some of the features highlighted throughout the series include reloading, deer hunting, shotgunning, rifle hunting, bow hunting, classroom instruction, a woman's view (which will be presented by Mrs. Arthur L. Cone of Vienna, a Virginia representative of the National Rifle Association), range firing and target detection.

"The second half of the series will be on boating safety," Ron concluded, "and the entire package will be available for syndication for educational TV throughout the state."

### Carroll County Warden Named Game Warden of the Year

Charles R. Chappell, State Game Warden stationed in Carroll County, has been named Virginia Game Warden of the year. Chappell joined the Game Commission warden force in 1959 and was stationed in Carroll County. He was born in Galax and, after growing up on a dairy farm and graduating from high school, he joined the Navy in 1946 serving two years in active service and 5 years in the reserves, a year of which was also active service. After returning he took advantage of Veterans Vocational Agriculture training and some business and physical education course work from Temple University in Philadelphia, Pennsylvania. He was deputy sheriff of Carroll County at the time he joined the Game Warden force.

Mr. Chappell's latest contribution to the Game Commission's overall program was his yeoman service in helping to line up the many options and sales agreements that made the Game Commission's Crooked Creek project possible. The Crooked Creek area will include the state's third fee trout fishing stream plus other recreational features.



Edited by ANN PILCHER

## Nature Camp and Its New Director



Blossingham Photographic Services, Lexington

Colonel John H. Reeves, Jr., of the biology department of the Virginia Military Institute, who became executive director of Nature Camp this year (replacing Brent Heath of Gloucester), chats with some camera carrying campers. According to Director Reeves, Nature Camp's aim is to produce a corps of knowledgeable future citizens who so love the world that they will fight a strong battle to protect it and keep it as it should be maintained.

## KIDS GARDENING

A First Indoor Gardening Book for Children  
written by Aileen Paul  
Illustrated by Arthur Hawkins



In easy-to-follow format Aileen Paul's **KIDS GARDENING** gives basic know-how for successful indoor gardening. It deals with plants easy to grow indoors and tells how to avoid killing them by drowning, smothering, starving, parching, cramping, freezing, etc. Flowering, foliage, aquatic, desert garden, rock garden and terrarium plants are among those included in the 96 page book published this year by Doubleday & Co. and selling for \$4.50.

Larry Moter (left), Nature Camp forestry instructor, was trying to find ginseng when he stumbled onto Czar (in Rock-bridge County outside Vesuvius on August 2), the 48-inch black timber rattler held by Serpentology Instructor John Beard, above right, who bagged the snake. The reptile broke through the bag in which he was first held and it took Beard a second 10 minute effort to recapture Czar. The 3 lb. reptile with 17 rattles was carried in a double bag approximately five miles to camp and displayed along with Nature Camp's other serpents, including 6 other rattlers and 3 copperheads. Later Czar was sent to the reptile house in the National Zoo, where he can be viewed along with Czarina, a golden phase timber rattler caught in the same area where Czar was found.

Instructors make every effort to stay away from the classroom type of instruction where possible, utilizing such other teaching methods as projects, visits to outdoor areas, or actually becoming involved in the practice of the science when applicable. An archaeological dig is in operation at the Camp; students have constructed their own swamp to study the ecology of swamp animals and plants; paleontology classes have watched the process of fossil formation in the marl creeks of the area. Visits have been made to virgin forests, to fire towers, to fossil beds and to two different archaeological digs. Major A. Roland Jones, VMI astronomer, has spent considerable time with the campers during eclipses and has set up special programs in the Sale Planetarium and the Klink Observatory for campers interested in astronomy. In addition, he visited the Camp to instruct in navigation, side-real time and other interesting phenomena.

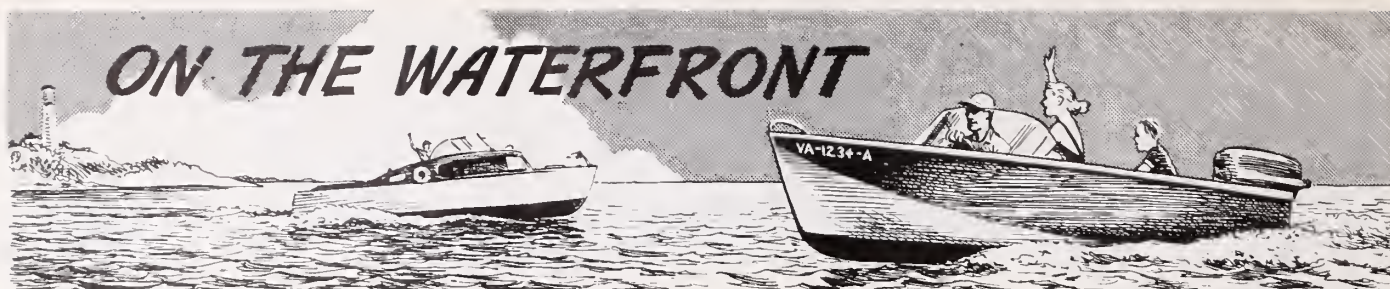
To teach about 80 campers per session, the camp has 25 resident instructors and counselors and help from universities and governmental agencies—specialists in the various fields.

Blossingham Photographic Services



Nature Camp, situated on land leased from the George Washington National Forest, is owned by the Virginia Federation of Garden Clubs, Inc., and operates on a budget approved by the Federation's Board of Trustees. Four two-week sessions of approximately 40 boys and 40 girls are held each summer, accommodating a maximum number of 320 campers. First session enrolls *upper class high school* students; second, 7th and 8th graders; third, 6th and 7th grade students; fourth session, 5th and 6th graders. Each applicant must be recommended by the president of a garden club and the school principal. Between 15 and 20 percent of the campers receive scholarships from garden clubs, and a scattering are sent by bird clubs and natural history societies.

Campers receive a minimum of 1-½ hours instruction in each of the following subjects—archaeology, botany, conservation, entomology, forestry, geology, limnology, paleontology, serpentology, survival, wildlife art, ecology, and mycology—and get about 20 hours of instruction in the course of their choice, thus obtaining a considerable depth of knowledge in one given field of science.



### Fueling Commandments

Trifle thee not with petroleum substances and vapors, for lo, they are as treacherous as the serpent's fangs.

Bringeth down with all thy might, thy wrath upon they that wouldst partake of the weed during fueling . . . that thy days be many and thy beard not be singed.

Taketh care that thy container not runneth over, for spills changeth to vapors that lurketh in low spots to await the unwary.

Taketh heed that all of the words of thy mentor and teacher, the Coast Guard Auxiliary . . . for truly they wouldst deem thee "Ancient Mariner".

Causeth thou the caps of thy containers that holdth back the fury of fuel to be securely fastened so that it laboreth only in thy engine and no other place.

—Courtesy U. S. Coast Guard

### The Careful Boating "Good Samaritan"

A special law, which can't be found in any law volumes, governs all pleasure boatmen, but it has silently been in existence since man first realized that trouble is sometimes encountered in watery travel.

This "unwritten law of the waterways encompasses the *help* one boater gives to another who is in distress or disabled. That assistance could take many forms—a gallon of spare gas for a disabled boater to reach shore, a tow back to port if serious engine failure occurs, or, more dramatically, rescuing the occupants of a capsized craft. Whatever the situation, the law's strength lies with the individual, who does not "turn his back" on a fellow boatman.

All ordinances, whether documented or not, have certain procedures which

must be followed and in a safe manner. Otherwise, the results of the assistance could be more tragic than the original emergency.

Assistance on the water is mostly a two-way street; both parties should understand how to safely offer and receive help and lessen the chance of further damage or injury.

For instance, if the vessel in distress requires a tow back to shore, there are a few basic procedures that should be followed by both boat operators. Remember, the craft doing the towing passes the towline to the disabled boat. The towline should be attached securely to the bow cleats of the vessel being towed, but in manner that will enable immediate release if the line becomes too strained and in danger of breaking. The person doing the towing should attach the towline to the forward-most position possible on his craft.

A line attached to the stern would prevent maneuvering and create an extreme drag, which could result in swamping if the weather and water conditions became rough.

Nylon or plastic water ski lines, which have excellent spring and flotation, or a thick Manila line, if available, would be good examples of proper towing lines. Starting off easily, the towboat should maintain a steady pull on the vessel-in-tow while occupants of both boats keep watchful eyes

on the towline. If it breaks loose, the whiplash may cause injury. Have an anchor ready in the towed vessel if the line does part. Proceed cautiously back to port.

### TRANSFER OF EMERGENCY EQUIPMENT AND CAPSIZINGS

Passing emergency equipment from one small boat to another can be tricky business. Remember to place cushioning fenders along sides of your craft to prevent damage when coming alongside a disabled boat. Slowly maneuver into position and try to remain seated when the actual transfer takes place. If the equipment is heavy enough to require you to stand, keep as low as possible and try to maintain an even trim to your vessel.

### STICK WITH BOAT

Finally, always stick with your boat if a capsizing does occur. The flotation material used in most manufactured pleasure boats will keep them afloat, even during the most severe weather and water conditions. Make sure your personal flotation devices (life vests, cushions, etc.), are sufficient and easily accessible for each person on board, as required by federal law. And one final, but most important, piece of advice—Don't Panic! Hold onto your vessel and relax; there'll be someone along soon to help you out of your predicament. Don't worry; it's unwritten law.

If your boat should capsize, remain with your boat; don't try to swim to shore, and don't panic.

Photo courtesy Evinrude Motors



## *Bird of the Month:*

By JOHN W. TAYLOR  
*Edgewater, Maryland*



**A** CENTURY ago, the ring-bill was the most numerous of our gulls; so abundant, in fact, that Audubon referred to it simply as the common American gull. Its breeding range extended from Labrador to Alaska, and across the entire Northwest down to California. Its abundance on the interior Lakes of Canada dumbfounded the first explorers of that territory.

Not tolerant of human disturbance, its breeding range has since narrowed, and its numbers are greatly diminished. Other gulls suffered the same fate, but some species have recovered and are now prospering on the garbage and sewage that is dumped into our harbors and rivers.

The ring-bill is a bit more fastidious. Inland, insects make up a large portion of their diet, and they are adept at catching grasshoppers on the wing. Along the coast, it is fond of beachcombing, capturing crustaceans left by the receding tide. It is the first species to spot the ploughman at work, and large flocks soon assemble to glean the newly furrowed turf.


In general pattern, the ring-billed gull is nearly identical with the larger herring gull. The seasoned gull-watcher, though, has little trouble recognizing the ring-bill by its smaller size and lighter, more buoyant flight. If the bird is close enough, the ring on the bill and yellowish-green legs are clinching field marks.

The ring-bill is regularly seen throughout the winter months in Virginia Tidewater. About mid-March, the population is augmented by an influx of migrants, enroute to nesting grounds in the interior of the continent. This northwesterly course takes most of the birds up the James and the Potomac, past Richmond and Washington, where they sometimes congregate by the hundreds. As spring advances, the flight continues up the valleys to the west. Some ring-bills still nest in New England and in the maritime provinces, but banding recoveries show that most Chesapeake Bay birds nest in the central US and southern Canada. Occasional non-breeding individuals remain south all summer, most of them still in the immature plumage. The juvenile bird is lighter than the young of the herring gull, and with a tail bar that is never present in that species.

## *The Ring-billed Gull*

# BOAT OWNERS!

## IS YOUR MOTORBOAT **NUMBERED?**



Under the Virginia Boating Safety Act, all motorboats regardless of their horsepower must have a Virginia registration number



**NUMBERS...**

*at least three inches  
high ... must be displayed  
on each side of boat's bow  
hyphens or full letter spaces between letters and numerals.*

### **OBTAIN AN APPLICATION FORM**

at any fishing or hunting license agency,  
city or county clerk, sporting goods store,  
boat dealership or marina

### **SEND APPLICATION**

and \$8.00 for three year registration to:

#### **BOAT SECTION**

Commission of Game & Inland Fisheries  
P.O. Box 11104 • Richmond, Virginia 23230